The O Zone

CODE RED ALERT

Student Booklet

Introduction.

On May 20, 1996, television, radio stations, and newspapers in the Baltimore area announced a “Code Orange” air quality alert! The “Code Orange Alert” was issued by the Maryland Department of Environment. What does the alert mean? Are we supposed to stop breathing? The Maryland Department of Environment is that part of state government responsible for ensuring that the physical environment of our state is clean and healthy for Maryland citizens.

In this task, you will learn about air quality, air quality alerts and ozone levels, then make a decision regarding what you can do to improve air quality in Maryland.

Activity 1.

Think about where you live and the quality of the air you breathe. Work with a partner to write four questions about air quality that you would ask of a scientist from the Maryland Department of Environment. For instance, how many alerts are issued each year?

1. _____

_____

2. _____

_____

3. _____

_____

4. _____

_____

The Maryland Department of Environment has provided us with maps, data, charts, and fact sheets about air quality in Maryland. Instead of everyone in class reading all the air quality resource materials, your group will study just one of the materials.

As you read and analyze your resource material and answer related questions, you will become an "expert" on that material. Then, for Activity 3, you will "jigsaw" into new groups with different students. Each of the new groups will then have an "expert" from each of the original groups.

Follow your teacher's directions to form your groups.

Activity 2.

The resource on air quality includes questions for you to answer. Review those questions before starting to read and analyze the material you have been given. Be prepared to share what you learn. You should take notes or underline information that will support your answers.

You may take notes in the box below.

Activity 3.

Follow the directions of your teacher to become part of a “jigsaw” group.

As part of Activity 1, your teacher listed a series of questions on the board, including the three below. Working with your new “jigsaw” group, contribute your “expert” knowledge to the group’s discussions of the answers. Be sure that each member of your group records the answer to each of the questions.

When you are finished, choose one of your group members to be a spokesperson during the class discussion.

Step A. Describe the air quality problem in Maryland.

Step B. What are the causes and effects of the air quality problem in Maryland?

Step C. Is the air quality problem in Maryland getting better or worse? Include data to support your answer and reasons why.

Activity 4.

There are many more questions that can be asked about ozone. Follow the directions of your teacher to complete one or more of the following:

Step A. Do you have any friends, relatives, or classmates who might be especially concerned about a “Code Red Alert?” List these people and explain why they should be concerned.

Step B. What should you do during a “Code Red Alert?” Explain the reasons for your actions.

Step C. Which regions of Maryland should be especially concerned about ozone air pollution? Explain the reasons for your answer.

Write your answers on the lines below, according to your teacher’s directions.

Activity 5.

You have looked at the ozone air quality problem in Maryland by working in an “expert” group, a “jigsaw” group, independently, and as a class. It is now time for you to decide what you, as an individual, can do to help improve air quality. Work on your own to answer the following questions.

Step A. Explain the role of individuals in improving ozone air quality.

Step B. Make a list of things you can do to improve ozone air quality in Maryland.

Step C. It is important to think about the consequences of your actions. If you did the things you listed in Step B, what might the consequences be for you and for other people?

Step D. How can you persuade members of your family or other important people in your life to help you take these actions?